

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Minh Pham on 12/31/2008.

The amendments are as follows:

Claims 1-8 and 14-22 are canceled.

### ***Response to Arguments***

1. Applicant's arguments, see p. 8, bottom to p. 9, top, filed 10/30/2008, with respect to independent claim 9, have been fully considered and are persuasive. The rejection of 04/30/2008 has been withdrawn. With the cancellation of claims 1-8 and 13-22, the remaining claims, 9-13 are allowed.

2. **Claims 9-13** are allowed.

3. The following is an examiner's statement of reasons for allowance: The prior art teaches methods for use of sol-gels as matrices in encapsulation of biomolecules such as nucleic acids and as matrices in capillary electrochromatography in which nucleic acids are fractionated based on differential mobilities through the matrix and under influence of the electric field. Such methods do not teach or fairly suggest the combined use of sol-gel matrices, with or without included silica particles and in microfluidic

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devices, capable of binding or adsorbing nucleic acids, in methods comprising purification of nucleic acids by adsorption and subsequent release. Tang teaches sol-gels, including those comprising silica. However, Tang does not disclose the use of such sol-gels in nucleic acid binding procedures or conditions for their use in extracting nucleic acids. With the amendments incorporated in the communication of 10/30/2008, examiner finds that the combined teachings of Tang and Knapp, who teaches microfluidics with a focus on their utility in supporting reactions of nucleic acids, do not teach or fairly suggest to one of ordinary skill in the art the combined limitations of applicant's amended independent claim 9. Further, while Christel teaches nucleic acid capture in microfluidic devices that fairly suggests their use for solid phase extraction, such combination of Christel with Knapp is deficient in not fairly suggesting use of sol-gel matrices according to applicant's invention in a method of binding and releasing nucleic acids in a purification. Therefore, to meet the limitations of the amended independent claim, distinct limitations from at least two secondary references would have to be combined with Knapp, and such combinations done jointly would not be suggested to one of ordinary skill in the art. The claims 9-13 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY G. KINGAN whose telephone number is

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(571)270-3720. The examiner can normally be reached on Monday-Friday, 8:30 A.M. to 5:00 P.M., E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

1/2/2009

/Yelena G. Gakh/  
Primary Examiner, Art Unit 1797

TGK